

WASHINGTON DEPARTMENT OF ECOLOGY  
MAILSTOP 7600  
OLYMPIA, WASHINGTON 98504

IN THE MATTER OF: ] NO. PSD-90-03 AMENDMENT 3  
] FINAL APPROVAL  
Ash Grove Cement Company ] OF PSD APPLICATION  
Portland Cement Clinkering Plant ]  
Seattle, Washington ]

Pursuant to the U.S. Environmental Protection Agency (EPA) regulations for the Prevention of Significant Deterioration (PSD) set forth in Title 40, Code of the Federal Regulations, Part 52 and based upon the complete Prevention of Significant Deterioration (PSD) application submitted by Ash Grove Cement Company and the technical analysis performed by the Department of Ecology (Ecology), dated November 16, 1998, Ecology now finds the following:

FINDINGS

1. Ash Grove Cement Company (Ash Grove) constructed a new 750,000 ton per year clinker-producing Portland cement plant in the Seattle Duwamish area after obtaining the necessary preconstruction approvals and permits in the form of a final PSD approval issued by Ecology on June 20, 1990 and Order of Approval No. 7381 issued by the Puget Sound Air Pollution Control Agency (PSAPCA) on June 19, 1990. On December 29, 1994, PSAPCA issued the amended Order of Approval No. 3382. The corresponding amended PSD was issued on November 7, 1995. An application for an amendment to the PSD approval was submitted on June 6, 1995, and was found to be complete on July 12, 1995. On June 29, 1998, PSAPCA issued the second amendment to the Order of Approval, No. 7381. The corresponding amended PSD was issued on March 8, 1999. On June 6, 2001, Puget Sound Clean Air Agency (PSCAA, formerly PSAPCA) issued the third amendment in the updated version of Order of Approval No. 7381.
2. The cement plant qualifies as a major source of air pollutants because it is listed as a major stationary source under Title 40, Code of the Federal Regulations, Part 51, Section 166, paragraph (b)(1)(i)(a) and has the potential to emit more than 100 tons per year of

several pollutants. It is located in an area designated Class II for the purposes of PSD evaluation, under 40 CFR 51.24.

3. The Ash Grove site is within an area that is currently in attainment with all National Ambient Air Quality Standards (NAAQS).
4. At the time of the original permit application, the proposed emissions of nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), and carbon monoxide (CO) were in excess of PSD pollutant significance levels and were subject to PSD review by Ecology. The emissions of all other air pollutants, including particulate matter, from the proposed project were subject to new source review by the PSAPCA.
5. PSCAA treated PM<sub>10</sub> emissions from the Ash Grove facility under “non-attainment” requirements. PSCAA required lowest achievable emission rates (LAER) and offsets for control of PM<sub>10</sub> emissions. PSCAA and Ecology required Best Available Control Technology (BACT) for the control of all air pollutants emitted by the proposed project.
6. The NAAQS for NO<sub>x</sub> is based on annual emissions quantities. The facility as proposed in the original PSD application would generate up to 1,846 tons per year of NO<sub>x</sub>. Changes to short-term emission limits requested in this PSD amendment application will not result in any change in the annual emissions of NO<sub>x</sub>.
7. The facility as proposed in the original PSD application would generate up to 176 tons per year of SO<sub>2</sub>. No changes to emission limits for SO<sub>2</sub> are requested in this PSD amendment.
8. The facility as proposed in the original PSD application would generate up to 3,353 tons per year of CO. There are no changes to emission limits for CO in this PSD amendment.
9. The facility as proposed in the original PSD application would generate up to 18.6 tons per year of volatile organic compounds (VOC). There are no changes to VOC emission rate in this PSD amendment.
10. This amendment will have no significant adverse impact on air quality.
11. Odors from the facility will be kept to a reasonable minimum.
12. No noticeable effect on industrial, commercial, or residential growth in the Seattle area is anticipated due to this amendment.

13. maximum allowable emissions from Ash Grove under the original and amended PSD permits will not impair Visibility in any Class I area. Screening analyses showed no significant visibility degradation resulting from the modification.

14. Ecology finds that all requirements for PSD amendment are satisfied.

#### APPROVAL CONDITIONS

1. NO<sub>x</sub> emissions from the system exhaust stack shall not exceed 650 ppm corrected to ten percent oxygen and standard dry conditions on a 24-hour average. NO<sub>x</sub> emissions shall be measured by a continuous emission monitoring system that meets the requirements of condition 7 whenever the kiln is operating. NO<sub>x</sub> emissions from the system exhaust stack shall not exceed an annual emission limit of 1,846 tons per year based upon 8,760 hours of operation per year.

2. SO<sub>2</sub> emissions from the system exhaust stack shall not exceed:

a. 180 ppm corrected to ten percent oxygen and standard dry conditions on an hourly average, except during periods of start-up preheat, start-up and shutdown of the kiln, and during scheduled maintenance of the main baghouse;

b. During the kiln start-up feed introduction period SO<sub>2</sub> emissions from the system exhaust stack shall not exceed 200 ppm corrected to ten percent oxygen and standard dry conditions on an hourly average; and

c. During the kiln start-up pre-heating period, shutdown of the kiln, and during scheduled maintenance of the main baghouse, the SO<sub>2</sub> limit shall consist of compliance with the following work practices and conditions:

1) Only natural gas shall be used as fuel during the kiln start-up pre-heating period;

2) Sulfur rings shall be removed from the kiln prior to start-up if sulfur ring formation had required the kiln to be shut down; and

3) The kiln shall be operated in accordance with all PSAPCA operation and maintenance requirements.

SO<sub>2</sub> emissions shall be measured by a continuous emission monitoring system that meets the requirements of condition 7 whenever the kiln is operating, other than during pre-

heating. SO<sub>2</sub> emissions from the system exhaust stack shall not exceed an annual emission limit of 176 tons per year based upon 8,760 hours of operation per year.

3. CO emissions from the system exhaust stack shall not exceed 1,045 ppm corrected to ten percent oxygen and standard dry conditions or 538 pounds per hour on an eight-hour average. CO emissions shall be measured by a continuous emission monitoring system that meets the requirements of condition 7 whenever the kiln is operating. CO emissions from the system exhaust stack shall not exceed an annual emission limit of 2,353 tons per year based upon 8,760 hours of operation per year.

4. With the exception of NO<sub>x</sub>, SO<sub>2</sub>, and CO the net increase in emissions of any pollutant regulated under the clean air act shall be less than the significant levels in 40 CFR 52.21(b)(23)(i), (July 1, 1988 revision).

5. Within 60 days after achieving maximum production, but not later than 180 days after initial start-up by any source affected by the modification, Ash Grove shall conduct performance tests for NO<sub>x</sub>, SO<sub>2</sub>, and CO at that source to be performed by an independent testing firm. A test plan shall be submitted for Ecology's approval at least 30 days prior to the testing.

6. Sampling ports and platforms must be provided for the system exhaust stack after the final pollution control device. The ports must meet the requirements of 40 CFR, Part 60, Appendix A Method 1, (July 1, 1988 revision). Adequate permanent and safe access to the test ports must be provided. Other arrangements may be acceptable if approved by Ecology prior to installation.

7. Any continuous emission monitoring system required in conditions 1 through 3 shall conform with EPA Title 40 Code of the Federal Regulations, Part 60, Appendix B Performance Specifications (July 1, 1988 revision) as indicated below:

- a. Continuous emission monitoring systems for SO<sub>2</sub> and NO<sub>x</sub> - Performance Specification 2
- b. Continuous emission monitoring systems for O<sub>2</sub> and CO<sub>2</sub> - Performance Specification 3
- c. Continuous emission monitoring systems for CO - Performance Specification 4

In addition, before initial start-up a continuous emission monitoring quality control plan conforming with 40 CFR 60 Appendix F (July 1, 1988 revision) and acceptable to Ecology must be submitted and Ecology may require the plan to be periodically updated.

8. CEMS and process data required in conditions 1 through 3 shall be reported to the Puget Sound Air Pollution Control Agency at least monthly within thirty days of the end of each calendar month and in a format approved by the Puget Sound Air Pollution Control Agency.

9. For each occurrence of monitored emissions or process parameters in excess of the standard the report shall include the following:

- a. The time of the occurrence.
- b. Magnitude of the emission or process parameters excess.
- c. The duration of the excess.
- d. The probable cause.
- e. Any corrective actions taken or planned.
- f. Demonstrations required under WAC 173-400-107 (4), (5), or (6), presented to PSAPCA “as soon as possible” as required under WAC 173-400-107 (3), if the exceedance is to be considered as an “unavoidable excess emission” not subject to penalty.

10. Operating and maintenance manuals for all equipment that has the potential to affect emissions to the atmosphere shall be developed and followed. Copies of the manuals shall be available to Ecology and the Puget Sound Air Pollution Control Agency.

Emissions that result from a failure to follow the requirements of the manuals may be considered proof that the equipment was not properly operated and maintained.

11. Operation of the equipment must be conducted in accordance with data and specifications submitted as part of the PSD application unless otherwise approved by Ecology.

12. This approval shall become void if construction of the project is not commenced within eighteen (18) months after receipt of final approval, or if construction or operation of the facility is discontinued for a period of eighteen (18) months.

13. Any activity by Ash Grove or others, in a manner that is inconsistent with the application and this determination, shall be subject to enforcement under applicable regulations.

Nothing in this determination shall be construed so as to relieve Ash Grove of its obligations under any state, local, or federal laws or regulations.

14. Ash Grove shall notify Ecology in writing at least thirty days prior to start-up by any of the sources affected by the modification.

15. Access to the source by the U.S. Environmental Protection Agency (EPA), Ecology or Puget Sound Air Pollution Control Agency personnel shall be permitted upon request for the purpose of compliance assurance inspections. Failure to allow access is grounds for revocation of this determination of approval.

Reviewed by:

\_\_\_\_\_  
Bernard Brady, P.E.  
Technical, Information, and Engineering Services  
Washington State Department of Ecology

\_\_\_\_\_  
Date

Approved by:

\_\_\_\_\_  
Mary E. Burg  
Manager, Air Quality Program  
Washington State Department of Ecology

\_\_\_\_\_  
Date